An airborne Nd:YAG (532 nm) lidar was operated by the NASA Langley Research Center shortly following the June 1991 eruption of Pinatubo in the Philippines. The lidar system and analysis methods are described in Winker and Osborn [1992a, 1992b]. The July 1991 mission consisted of six flights, listed in Table 1. The lidar provided nearly continuous observations of the vertical and horizontal distribution of the volcanic material. The aerosol was found in distinct layers between less than a kilometer to several kilometers in vertical extent and ranging in altitude from 17 to 26 km. While highly variable in structure and in strength layers were observed everywhere south of 34°N. Layers north of 20°N were relatively optically thinner, with peak scattering ratios of 3 or less. South of 15°N, peak scattering ratios were often greater than 10 and as large as 70.

TABLE 1. Pinatubo Survey Flights

Date	*GMT*	*Latitudinal Extent*	*Longitudinal Extent*
7/7-8	1907-0121	Wallops to Barbados	
7/8-9	2005-0037	12°-16°N	59.5°-67°W
7/10-11	1406-0033	0°-13°N	46°-59.5°W
7/12-13	1628-0324	4.5°S-13°N	52°-59.5°W
7/13	2020-2313	9.5°-14.5°N	57°-59.5°W
7/14	1500-2025	Barbados to Wallops	

Winker, D. M., and M. Osborn (1992), Airborne lidar observations of the Pinatubo volcanic plume, Geophysical Research Letters, 19(2), 167-170.
Winker, D. M., and M. Osborn (1992), Preliminary analysis of observations of tile Pinatubo volcanic plume with a polarization-sensitive lidar, Geophysical Research Letters, 19(2), 171-174.